

## Flora of Gyeongju National Park, Korea

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**Abstract :** This study found 39 orders, 112 families, 354 genuses, 515 species, 1 sub-species, 78 varieties and 11 forma, totalling 605 classifications. Dominant vegetations were deciduous trees (oak trees) such as *Quercus mongolica*, *Q. variabilis*, *Q. acutissima*, *Q. aliena*, and *Q. serrata* in Tohamsan and Danseoksan areas while dominant species was *Pinus thunbergii* in the Daebon area and *P. densiflora* in the Gumisan, Namsan, Sogeumkang, Hwarang and Seoak areas. Pte-Q was 1.35. It was higher than in mountainous inland areas, which was desirable succession.

**Key words :** Flora, Gyeongju National Park

### Introduction

The first research into the plants in Korea was the research conducted by the Russian Scientist, Schlippenbach, B. A. (1854), who collected 50 or so floral species in the East Sea and sent them to the western nations. Then, fathers Faurie, R. P. U. and Taquet, E. J. collected samples and sent them to the scientists in Europe, which was published in the academic circle. Palibin, J. W. (1898~1901) organized their research findings and published *Conspectus Florae Koreae*. After that, a Japanese scientist, Nakai (190, 1911) compiled and published *Flora koreana* (I, II).

After the liberation of Korea from the Imperial Japan, Chuong (1956, 1957) published the picture book of Korean plants, which served as a breakthrough to the development of the botany of Korean peninsula, revitalizing botanical research by the Koreans.

However, the western materialism that swept Korea with the liberation accelerated industrialization, which shifted the focus of national policies to industrialization and development. As a result, industrial complexes, residential areas and furthermore, entertainment areas made inroads into national land. With the destruction of national land, most of living creatures were placed in life-threatening danger. Although some areas are designated and protected as national parks, these areas barely escape from serious devastation. Unfortunately, the government cannot

even come up with countermeasures.

Most of species (about 70%) are inhabited in national parks and natural conservational areas, but with lack of scientific and academic research into these areas. It is realistically difficult to set up protection and preservation policies of the species. Though intensive research is recently conducted in some of national parks and conservation areas, it is extremely short-lived and limited.

Thus, this research was intended to provide basic data for further research, preservation and maintenance by identifying the flora that grow in 8 areas of the national park.

### Materials and Methods

#### Overview on research sites

Gyeongju National Park stretches 8 areas in and around Gyeongju-si, Gyeongsangbukdo. Tohamsan area (76.95 km<sup>2</sup>), Namsan area (21.0 km<sup>2</sup>), and Daebon area were designated as national parks in 1968, covering a total of 102.05 km<sup>2</sup>. With the addition (1.0 km<sup>2</sup>) to Daebon area in 1971, Seoak area (4.30 km<sup>2</sup>), Hwarang area (3.90 km<sup>2</sup>), Sogeumgangsan area (6.8 km<sup>2</sup>), and Danseoksan area (14.0 km<sup>2</sup>) were included into the national park, making it a total of 132.05 km<sup>2</sup>. Currently, the Gyeongju National Park covers 138.16 km<sup>2</sup> with the new inclusion of Gumisan area (6.11 km<sup>2</sup>) in 1974. Of the park, an area of 30.86 km<sup>2</sup> is designated as national conservation area, 99.183 km<sup>2</sup> as national environmental area, and 8.117 km<sup>2</sup> as communities.

### Research Method

The research into the flora and vegetation conducted three

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**Table 1.** Composition of vascular plants in Sosan, Gyeongju National Park

		Order	Family	Genus	Species	Sub species	Variety	Breed	Total
Equisetineae	I	1	1	1	1	-	-	-	1
	II	1	1	1	1	-	-	-	1
Filicineae	I	2	6	10	11	-	1	-	12
	II	2	7	12	19	-	1	-	20
Gymnospermae	I	2	4	9	12	-	-	-	12
	II	2	4	9	12	-	-	-	12
Angiospermae	I	7	16	63	91	-	15	2	108
	II	7	16	72	108	-	17	2	127
Monocotyledoneae									
Dicotyledoneae	I	27	83	249	343	1	55	8	407
	II	27	84	260	375	1	60	9	445
Total	I	39	109	332	458	1	71	10	540
	II	39	112	354	515	1	78	11	605

I; Previous research, II; Previous research + this research

times from May 23 to May 25, 2007, from Aug. 18 to Aug. 19, 2007 and from Sept. 29 to Sept. 30, 2007.

Dry samples made for research of the flora is reserved in the National Museum of Science and the Korea National Arboretum and identification and classification of the species referred to picture books of Chuong (1956, 1957), Nakai (1909, 1911), Ohwi (1984), and Lee (1980).

On the other hand, Pte-Q was obtained to fathom the degree of damage to forest vegetation.

## Results and Consideration

### The Flora

For the flora, Kim (1994) reported 81 families, 208 genres, 238 species, 1 sub-species, 37 varieties and 1 forma which totalled 277 taxons while Lee (1997) reported 39 orders, 109 families, 332 genres, 458 species, 1 sub-species, 71 varieties and 10 forma which totalled 540 taxons. This research found 39 orders, 112 families, 354 genres, 515 species, 1 subspecies, 78 varieties and 11 forma which totalled 605 taxons.

**Table 2.** List on the Vascular plants in Gyeongju National Park

Scientific name & Korean name	I	II
Tracheophyta 관속식물門		
Sphenopsida 속새亞門		
Equisetineae 속새綱		
Equisetales 속새목		
Equisetaceae 속새과		
<i>Equisetum arvense</i> Linne	쇠뜨기	o
Pteropsida 양치식물亞門		
Filicineae 고사리綱		
Ophioglossales 고사리삼목		
Ophioglossaceae 고사리삼과		
<i>Botrychium ternatum</i> (Thunberg) Sw.	고사리삼	o
Filicales 고사리목		
Osmundaceae 고비과		
<i>Osmunda japonica</i> Thunberg	고비	o
Pteridaceae 고사리과		
<i>Dennstaedtia wilfordii</i> (Moore) Christ.	황고사리	o
<i>Dennstaedtia hirsuta</i> (Sw.) Mett. ex Miq.	잔고사리	\$
<i>Pteridium aquilinum</i> var. <i>latiusculum</i> (Desv.) Underw.	고사리	o
Davalliaceae 넉줄고사리과		
<i>Davallia mariesii</i> Moore	넉줄고사리	o

Table 2. Continued

Scientific name & Korean name	I	II
Aspidiaceae 먼마과		
<i>Woodsia manchuriensis</i> Hooker	만주우드풀	o
<i>Woodsia polystichoides</i> Eaton	우드풀	o
<i>Polystichum tripterum</i> (Kunze) Presl	십자고사리	o
<i>Dryopteris bissetiana</i> (Bak.) C. Christ.	죽제비고사리	o
<i>Dryopteris sacrosancta</i> Koidz.	애기죽제비고사리	o
<i>Dryopteris chinensis</i> (Bak.) Koidz.	가는잎죽제비고사리	\$
<i>Dryopteris erythrosora</i> O. Kuntze	홍지네고사리	
<i>Lastrea japonica</i> (Bak.) Copel.	지네고사리	
<i>Athyrium vidalii</i> (Fr. et Sav.) Nakai	산개고사리	o
<i>Athyrium yokoscense</i> (Fr. et Sav.) H. Christ	뱀고사리	\$
<i>Athyrium niponicum</i> (Mett.) Hance	개고사리	\$
<i>Athyrium dimorphophyllum</i> (Koidz.) Tagawa	큰진고사리	\$
Aspleniaceae 꼬리고사리과		
<i>Asplenium incisum</i> Thunb. 꼬리고사리	\$	
Polypodiaceae 고란초과		
<i>Lepisorus onoei</i> (Fr. et Sav.) Ching	애기일엽초	o
Gymnospermae 나자식물綱		
Coniferophytae 구과식물아강		
Ginkgoales 은행나무목		
Ginkgoaceae 은행나무과		
<i>Ginkgo biloba</i> Linne	은행나무	o
Coniferales 구과목		
Taxaceae 주목과		
<i>Taxus cuspidata</i> S. et Z.	주목	o
<i>Cephalotaxus koreana</i> Nakai	개비자나무	o
Pinaceae 소나무과		
<i>Abies holophylla</i> Maximowz	젓나무	o
<i>Larix leptolepis</i> (S. et Z.) Gordon	일본잎갈나무	o
<i>Cedrus deodara</i> (Roxb.) Loudon	개잎갈나무	o
<i>Pinus koraiensis</i> S. et Z.	잣나무	o
<i>Pinus rigida</i> Mill.	리기다소나무	o
<i>Pinus densiflora</i> S. et Z.	소나무	o
<i>Pinus thunbergii</i> Parl.	곰솔	o
Cupressaceae 측백나무과		
<i>Thuja orientalis</i> Linne	측백나무	o
<i>Juniperus rigida</i> S. et Z.	노간주나무	o
Angiospermae 피자식물綱		
Monocotyledoneae 단자엽식물亞綱		
Pandanales 부들목		
Typhaceae 부들과		
<i>Typha angustata</i> Bory et Chaub	애기부들	o
Helobiales 소생식물목		
Potamogetonaceae 가래과		
<i>Potamogeton crispus</i> Linne	말즘	o
Zosteraceae 거머리말과		
<i>Zostera marina</i> Linne	거머리말	o
<i>Phyllospadix iwatensis</i> Makino	새우말	o

Table 2. Continued

Scientific name & Korean name	I	II
Alismataceae 택사과		
<i>Sagittaria pygmaea</i> Miquel	올미	o
<i>Sagittaria aginashi</i> Makino	보풀	o
Hydrocharitaceae 자라풀과		
<i>Hydrilla verticillata</i> Casp.	검정말	o
Graminales 벼과		
Gramineae 벼과		
<i>Phyllostachys nigra</i> var. <i>henonis</i> Stapf	숨대	o
<i>Sasa borealis</i> (Hack.) Makino	조릿대	o
<i>Pseudosasa japonica</i> Makino	이대	o
<i>Alopecurus aequalis</i> var. <i>amurensis</i> (Kom.) Ohwi	뚝새풀	\$
<i>Agrostis clavata</i> Trin.	산겨이삭	o
<i>Calamagrostis arundinacea</i> (Linne) Roth	실새풀	o
<i>Cleistogenes hackelii</i> (Honda) Honda	대새풀	\$
<i>Avena sativa</i> Linne	귀리	o
<i>Agropyron ciliare</i> (Trin.) Fr.	속털개밀	o
var. <i>transiens</i> (Hack.) Ohwi	개밀	o
<i>Bromus japonicus</i> Thunberg	참새귀리	o
<i>Festuca ovina</i> Linne	김의털	o
<i>Poa sphondylodes</i> Trin.	포아풀	o
<i>Poa annua</i> L.	새포아풀	\$
<i>Melica onoei</i> Fr.	쌀새	o
<i>Molinia japonica</i> Hack.	진퍼리새	\$
<i>Muhlenbergia japonica</i> Steud.	취꼬리새	\$
<i>Zizania latifolia</i> Turcz.	줄	o
<i>Phragmites communis</i> Trin.	갈대	o
<i>Phragmites japonica</i> Steud.	달뿌리풀	\$
<i>Eragrostis ferruginea</i> (Thunberg) P. Beauv.	그렁	o
<i>Eragrostis multicaulis</i> Steud.	비노리	o
<i>Eleusine indica</i> (Linne) Gaertner	왕바랭이	o
<i>Cynodon dactylon</i> (Linne) Pers.	우산잔디	o
<i>Spodiopogon sibiricus</i> Trin.	큰기름새	\$
<i>Sporobolus elongatus</i> R. Br.	취꼬리새풀	o
<i>Sporobolus japonicus</i> (Steud.) Maxim. ex Rendle	나도잔디	\$
<i>Themeda triandra</i> var. <i>japonica</i> (Willd.) Makino	솔새	\$
<i>Zoysia japonica</i> Steud.	잔디	o
<i>Arundinella hirta</i> (Thunberg) Tanaka	새	o
<i>Arundinella hirta</i> var. <i>ciliata</i> Koidz.	털새	\$
<i>Pennisetum alopecuroides</i> (Linne) Spreng.	수크렁	o
<i>Pennisetum alopecuroides</i> (Linne) Spreng. for. <i>viridescens</i> Ohwi	청수크렁	o
<i>Sacciolepis indica</i> (L.) Chase	좁물뚝새	\$
<i>Setaria viridis</i> (Linne) Beauv.	강아지풀	o
<i>Setaria faberii</i> Herm.	가을강아지풀	\$
<i>Setaria glauca</i> (L.) P.Beauv.	금강강아지풀	\$
<i>Digitaria sanguinalis</i> (Linne) Scop.	바랭이	o
<i>Digitaria violascens</i> Link	민바랭이	o
<i>Eriochloa villosa</i> (Thunberg) Kunth	나도개피	o
<i>Oplismenus undulatifolius</i> (Ard.) Roem. et Schult.	주름조개풀	o
<i>Oplismenus undulatifolius</i> (Ard.) Roem. et Schult. var. <i>japonicus</i> Koidz.	민주름조개풀	o
<i>Echinochloa crus-galli</i> (Linne) Beauv.	돌피	o
<i>Echinochloa crus-galli</i> var. <i>frumentacea</i> (Roxb.) Wight	피	o
<i>Paspalum thunbergii</i> Kunth ex Steud.	참새피	\$
<i>Miscanthus sacchariflorus</i> Benth.	물억새	o
<i>Miscanthus sinensis</i> Anderss.	참억새	o
<i>Miscanthus sinensis</i> Anderss. var. <i>purpurascens</i> Rendle	억새	o
<i>Cymbopogon tortilis</i> var. <i>goeringii</i> (Steud.) Hand.- Mazz.	개솔새	o

Table 2. Continued

Scientific name & Korean name	I	II
Cyperaceae 사초과		
<i>Carex laevissima</i> Nakai	애괭이사초	o
<i>Carex canescens</i> Linne	산사초	o
<i>Carex humilis</i> Leyss.	산거울	o
<i>Carex pediformis</i> C. A. Meyer	넓은잎그늘사초	o
<i>Carex lanceolata</i> A. Gray	그늘사초	o
<i>Carex siderosticta</i> Hance	대사초	o
<i>Eleocharis acicularis</i> for. <i>longiseta</i> (Svenson) T. Koyama	쇠털골	o
<i>Fimbristylis miliacea</i> (Linne) Vahl	바람하늘지기	o
<i>Bulbostylis densa</i> (Wall.) Hand.-Mazz.	꽃하늘지기	\$
<i>Scirpus radicans</i> Schk.	도루박이	o
<i>Scirpus karuizawensis</i> Makino	술방울고랭이	o
<i>Scirpus fluvialis</i> (Torr.) A. Gray	매자기	o
<i>Scirpus wallichii</i> Nees	수원고랭이	o
<i>Scirpus triqueter</i> Linne	세모고랭이	o
<i>Cyperus orthostachyus</i> Fr. et Sav.	쇠방동사니	o
<i>Cyperus amuricus</i> Maximowz	방동사니	o
<i>Cyperus difformis</i> Linne	알방동사니	o
<i>Cyperus iria</i> L.	참방동사니	\$
<i>Cyperus microiria</i> Steud.	금방동사니	\$
<i>Cyperus sanguinolentus</i> Vahl	방동사니대가리	\$
Arales 천남성목		
Araceae 천남성과		
<i>Pinellia ternata</i> (Thunberg) Breit.	반하	o
<i>Arisaema angustatum</i> var. <i>peninsulae</i> Nakai	점박이천남성	o
<i>Arisaema amurense</i> var. <i>serratum</i> Nakai	천남성	o
Lemnaceae 개구리밥과		
<i>Spirodela polyrrhiza</i> (Linne) Schleid.	개구리밥	o
<i>Lemna paucicostata</i> Hegelm.	좁개구리밥	o
Farinales 분질배유목		
Commelinaceae 닭의장풀과		
<i>Commelina communis</i> Linne	닭의장풀	o
<i>Commelina coreana</i> Lév.	좁닭의장풀	o
<i>Aneilema keisak</i> Hassk.	사마귀풀	o
Liliales 백합목		
Juncaceae 골풀과		
<i>Luzula capitata</i> (Miq.) Miq.	평의밥	o
<i>Luzula multiflora</i> Lej.	산평의밥	o
<i>Juncus effusus</i> var. <i>decipiens</i> Buchen	골풀	o
Liliaceae 백합과		
<i>Veratrum maackii</i> var. <i>japonicum</i> T. Shimizu	여로	o
<i>Hosta minor</i> (Bak.) Nakai	쭈뼌비추	o
<i>Hosta longipes</i> (Fr. et Sav.) Matsumura	비비추	o
<i>Hemerocallis fulva</i> Linne	원추리	o
<i>Hemerocallis minor</i> Mill.	애기원추리	o
<i>Allium grayi</i> Regel	산달래	o
<i>Allium thunbergii</i> G Don	산부추	o
<i>Allium monanthum</i> Maximowz	달래	o
<i>Lilium tsingtauense</i> Gilg	하늘말나리	o
<i>Lilium distichum</i> Nakai	말나리	o
<i>Lilium concolor</i> var. <i>partheneion</i> Bak.	하늘나리	o
<i>Lilium amabile</i> Palibin	털중나리	o
<i>Lilium leichtlinii</i> var. <i>tigrinum</i> Nichols	중나리	o
<i>Lilium tigrinum</i> Ker - Gawl.	참나리	o

Table 2. Continued

Scientific name & Korean name	I	II
<i>Asparagus schoberioides</i> Kunth	비짜루	0
<i>Polygonatum humile</i> Fisch.	각시 등굴레	0
<i>Polygonatum odoratum</i> var. <i>pluriflorum</i> Ohwi	등굴레	0
<i>Disporum sessile</i> D. Don	윤판나물	0
<i>Disporum smilacinum</i> A. Gray	애기나리	0
<i>Disporum viridescens</i> (Maximowz) Nakai	큰애기나리	0
<i>Convallaria keiskei</i> Miq.	은방울꽃	0
<i>Liriope platyphylla</i> Wang et Tang	맥문동	0
<i>Smilax nipponica</i> Miq.	선밀나물	0
<i>Smilax riparia</i> var. <i>ussuriensis</i> Hara et T. Koyama	밀나물	0
<i>Smilax china</i> Linne	청미래덩굴	0
<i>Smilax sieboldii</i> Miq.	청가시덩굴	0
<i>Smilax sieboldii</i> Miq. var. <i>inermis</i> Nakai	민청가시덩굴	0
Amarylidaceae 수선화과		
<i>Lycoris squamigera</i> Maximowz	상사화	0
Dioscoreaceae 마과		
<i>Dioscorea japonica</i> Thunberg	참마	0
<i>Dioscorea batatas</i> Decne.	마	0
<i>Dioscorea tokoro</i> Makino	도꼬로마	0
<i>Dioscorea nipponica</i> Makino	부채마	0
<i>Dioscorea quinqueloba</i> Thunberg	단풍마	0
<i>Dioscorea septemloba</i> Thunberg	국화마	0
Iridaceae 붓꽃과		
<i>Iris koreana</i> Nakai	노랑붓꽃	0
<i>Iris pseudoacorus</i> Linne	노랑꽃창포	0
<i>Iris nertschinskia</i> Lodd.	붓꽃	0
<i>Iris rossii</i> Bak.	각시붓꽃	\$
Orchidales 난초목		
Orchidaceae 난초과		
<i>Platanthera metabifolia</i> F. Maekawa	제비난	0
<i>Cephalanthera erecta</i> (Thunberg) Bl.	은난초	0
<i>Spiranthes sinensis</i> (Pers.) Ames	타래난초	0
Dicotyledoneae 쌍자엽식물亞綱		
Archichlamydeae 이판화群		
Piperales 후추목		
Chloranthaceae 홀아비꽃대과		
<i>Chloranthus japonicus</i> Sieb.	홀아비꽃대	0
Salicales 버드나무목		
Salicaceae 버드나무과		
<i>Populus deltoides</i> Marsh.	미루나무	0
<i>Populus tomentiglandulosa</i> T. Lee	은사시나무	0
<i>Salix glandulosa</i> Seem.	왕버들	0
<i>Salix koreensis</i> Anderss.	버드나무	0
<i>Salix dependens</i> Nakai.	개수양버들	0
<i>Salix hulteni</i> Floderus	호랑버들	0
<i>Salix purpurea</i> var. <i>japonica</i> Nakai.	키버들	0
<i>Salix gracilistyla</i> Miq.	갯버들	0
Juglandales 가래나무목		
Juglandaceae 가래나무과		
<i>Platycarya strobilacea</i> S. et Z.	굴피나무	0
<i>Juglans mandshurica</i> Maximowz	가래나무	0

Table 2. Continued

Scientific name & Korean name	I	II
Fagales 참나무목		
Betulaceae 자작나무과		
<i>Betula schmidtii</i> Regel.	0	박달나무
<i>Betula platyphylla</i> var. <i>japonica</i> Hara	0	자작나무
<i>Alnus japonica</i> Steud.	0	오리나무
<i>Alnus hirsuta</i> (Spach) Rupr.	0	물오리나무
<i>Alnus firma</i> S. et Z.	0	사방오리
<i>Carpinus cordata</i> Bl.	0	까치박달
<i>Carpinus tschonoskii</i> Maximowz	0	개서어나무
<i>Carpinus laxiflora</i> Bl.	0	서어나무
<i>Carpinus coreana</i> Nakai	0	소사나무
<i>Corylus heterophylla</i> Fisch. Bl.	0	난티잎개암나무
<i>Corylus heterophylla</i> var. <i>thunbergii</i> Bl.	0	개암나무
<i>Corylus sieboldiana</i> var. <i>mandshurica</i> (Maxim) C.K.Schn.		물개암나무 §
Fagaceae 참나무과		
<i>Castanea crenata</i> S. et Z.	0	밤나무
<i>Quercus acutissima</i> Carruth.	0	상수리나무
<i>Quercus variabilis</i> Bl.	0	굴참나무
<i>Quercus dentata</i> Thunberg	0	떡갈나무
<i>Quercus aliena</i> Bl.	0	갈참나무
<i>Quercus mongolica</i> Fisch.	0	신갈나무
<i>Quercus serrata</i> Thunberg	0	줄참나무
Urticales 켜기풀목		
Ulmaceae 느릅나무과		
<i>Ulmus davidiana</i> Planch.	0	당느릅나무
<i>Hemiptelea davidii</i> Planch.	0	시무나무
<i>Zelkova serrata</i> Makino	0	느티나무
<i>Celtis sinensis</i> Pers.	0	팽나무
Moraceae 뽕나무과		
<i>Morus bombycis</i> Koidz.	0	산뽕나무
<i>Morus alba</i> Linne	0	뽕나무
<i>Broussonetia kazinoki</i> Sieb.	0	닥나무
Cannabinaceae 삼과		
<i>Humulus japonicus</i> S. et Z.	0	환삼덩굴
Urticaceae 켜기풀과		
<i>Urtica thunbergiana</i> S. et Z.	0	켜기풀
<i>Pilea peplodes</i> Hooker et Arnott	0	물통이
<i>Boehmeria nivea</i> (Linne) Gaudich.	0	모시풀
<i>Boehmeria spicata</i> Thunberg	0	쭈깨잎나무
<i>Boehmeria tricuspidata</i> Makino	0	거북꼬리
<i>Boehmeria longispica</i> Steud.	0	왜모시풀
Aristolochiales 쥐방울덩굴목		
Aristolochiaceae 쥐방울덩굴과		
<i>Aristolochia contorta</i> Bunge	0	쥐방울덩굴
<i>Asarum sieboldii</i> Miq.	0	족도리
Polygonales 마디풀목		
Polygonaceae 마디풀과		
<i>Rumex acetosa</i> Linne	0	수영
<i>Rumex crispus</i> Linne	0	소리쟁이
<i>Rumex conglomeratus</i> Murr.	0	목발소리쟁이
<i>Aconogonum polymorphum</i> (Ledeb.) T. Lee	0	싱아
<i>Bilderdykia dumetora</i> (Linne) Dum.	0	닭의덩굴

Table 2. Continued

Scientific name & Korean name	I	II
<i>Persicaria perfoliata</i> H. Gross	머느리배꼽	o
<i>Persicaria senticosa</i> Gross	머느리밑씻개	o
<i>Persicaria thunbergii</i> H. Gross	고마리	o
<i>Persicaria nepalensis</i> Miyabe et Kudo	산여뀌	o
<i>Persicaria hydropiper</i> (Linne) Spach	여뀌	o
<i>Persicaria vulgaris</i> Webb et Moq.	봄여뀌	o
<i>Persicaria blumei</i> Gross	개여뀌	o
<i>Persicaria filiforme</i> Nakai	이삭여뀌	\$
<i>Persicaria lapathifolia</i> S. F. Gray	흰여뀌	\$
<i>Persicaria sieboldi</i> Ohki	미꾸리뉘시	\$
<i>Polygonum aviculare</i> Linne	마디풀	o
Centrospermales 중심자목		
Chenopodiaceae 명아주목		
<i>Chenopodium album</i> var. <i>centrorubrum</i> Makino	명아주	o
<i>Chenopodium ficifolium</i> Smith	좁명아주	o
<i>Chenopodium album</i> L.	흰명아주	\$
Amaranthaceae 비름목		
<i>Amaranthus mangostanus</i> Linne	비름	o
<i>Achyranthes fauriei</i> H.Lév. & Vaniot	털쇠무릎	\$
Phytolaccaceae 자리공목		
<i>Phytolacca esculenta</i> V. Houtte	자리공	o
<i>Phytolacca americana</i> Linne	미국자리공	o
Portulacaceae 쇠비름목		
<i>Portulaca oleracea</i> Linne	쇠비름	o
Caryophyllaceae 석죽목		
<i>Arenaria serpyllifolia</i> Linne	벼룩이자리	o
<i>Pseudostellaria heterophylla</i> (Miq.) Pax.	개별꽃	o
<i>Pseudostellaria palibiniana</i> (Takeda) Ohwi	큰개별꽃	o
var. <i>hallaisanense</i> Mizushima	점나도나물	o
<i>Stellaria aquatica</i> Scop.	쇠별꽃	o
<i>Stellaria media</i> Villars	별꽃	o
<i>Stellaria alsine</i> var. <i>undulata</i> Ohwi	벼룩나물	o
<i>Dianthus sinensis</i> Linne	패랭이꽃	o
<i>Dianthus superbus</i> var. <i>longicalycinus</i> (Maximowz) Williams	슬패랭이꽃	o
<i>Lychnis cognata</i> Maximowz	동자꽃	o
<i>Melandryum firmum</i> (S. et Z.) Rohrb.	장구채	o
<i>Melandryum firmum</i> (S. et Z.) Rohrb. for. <i>pubescens</i> Ohwi	털장구채	o
<i>Melandryum seoulense</i> Nakai	가는장구채	o
Ranales 미나리아재비목		
Nymphaeaceae 수련목		
<i>Nymphaea tetragona</i> var. <i>angusta</i> Casp.	수련	o
<i>Nelumbo nucifera</i> Gaertner	연꽃	o
Ceratophyllaceae 붕어마름목		
<i>Ceratophyllum demersum</i> Linne	붕어마름	o
Ranunculaceae 미나리아재비목		
<i>Clematis fusca</i> var. <i>violacea</i> Maximowz	종덩굴	o
<i>Clematis heracleifolia</i> DC.	병조희풀	o
<i>Clematis mandshurica</i> Rupr.	으아리	o
<i>Clematis trichotoma</i> Nakai	할미밑망	o
<i>Clematis apiifolia</i> A.P. DC.	사위질빵	o
<i>Pulsatilla koreana</i> Nakai	할미꽃	o



Table 2. Continued

Scientific name & Korean name	I	II
<i>Hepatica asiatica</i> Nakai	노루귀	o
<i>Ranunculus japonicus</i> Thunberg	미나리아재비	o
<i>Thalictrum minus</i> var. <i>hypoleucum</i> (S. et Z.) Miq.	좀평의다리	o
<i>Thalictrum aquilegifolium</i> Linne	평의다리	o
<i>Thalictrum actaeifolium</i> S. et Z.	은평의다리	o
<i>Aconitum pseudo-laeve</i> var. <i>erectum</i> Nakai	진범	o
<i>Aconitum jaluense</i> Kom.	투구꽃	o
<i>Cimicifuga heracleifolia</i> Kom.	승마	o
<i>Cimicifuga simplex</i> Wormsk.	쫓대승마	o
<i>Paeonia obovata</i> Maximowz	산작약	o
<i>Paeonia lactiflora</i> var. <i>hortensis</i> Mak.	작약	\$
Lardizabalaceae 으름덩굴과		
<i>Akebia quinata</i> Decne.	으름	o
Menispermaceae 방기과		
<i>Cocculus trilobus</i> DC.	냉랭이덩굴	o
Magnoliaceae 목련과		
<i>Magnolia sieboldii</i> K. Koch	함박꽃나무	o
<i>Schizandra chinensis</i> Baill	오미자	o
Lauraceae 녹나무과		
<i>Lindera obtusiloba</i> Bl.	생강나무	o
<i>Lindera obtusiloba</i> Bl. for. <i>villosum</i> Nakai	털생강나무	o
<i>Lindera glauca</i> Bl.	감태나무	o
<i>Lindera erythrocarpa</i> Makino	비목나무	o
Papaverales 양귀비목		
Papaveraceae 양귀비과		
<i>Chelidonium majus</i> var. <i>asiaticum</i> (Hara) Ohwi	애기뿔풀	o
<i>Hylomecon vemale</i> Maximowz	피나물	o
Fumariaceae 현호색과		
<i>Dicentra spectabilis</i> (Linne) Lem.	금낭화	o
<i>Corydalis turtchaninovii</i> Bess.	현호색	o
<i>Corydalis turtchaninovii</i> var. <i>linearis</i> (Regel) Nakai	땃잎현호색	o
<i>Corydalis ochotensis</i> Turcz.	눈피불주머니	o
<i>Corydalis heterocarpa</i> S. et Z.	염주피불주머니	o
<i>Corydalis speciosa</i> Maximowz	산피불주머니	o
Cruciferae 십자화과		
<i>Brassica campestris</i> subsp. <i>napus</i> var. <i>nippo-oleifera</i> Makino	유채	\$
<i>Lepidium apetalum</i> Willd.	다닥냉이	o
<i>Thlaspi arvense</i> Linne	말냉이	o
<i>Cardamine leucantha</i> O. E. Schulz	미나리냉이	o
<i>Cardamine flexuosa</i> With.	황새냉이	\$
<i>Rorippa indica</i> (Linne) Hiern	개갓냉이	o
<i>Rorippa islandica</i> (Oedr) Borb.	속속이풀	o
<i>Capsella bursa-pastoris</i> (Linne) Medicus	냉이	o
<i>Draba nemorosa</i> var. <i>hebecarpa</i> Lindbl.	꽃다지	o
<i>Arabis glabra</i> (Linne) Bernh.	장대나물	o
<i>Descurainia sophia</i> (Linne) Prantl	재쭉	o
Rosales 장미목		
Crassulaceae 돌나물과		
<i>Orostachys malacophyllus</i> Fisch.	등근바위솔	o
<i>Sedum takesimense</i> Nakai	섬기린초	o
<i>Sedum spectabile</i> Boreau	큰평의비름	o

Table 2. Continued

Scientific name & Korean name	I	II
<i>Sedum verticillatum</i> Linne	세잎평의비름	0
<i>Sedum erythrostichum</i> Miq.	평의비름	0
<i>Sedum kamschaticum</i> Fisch.	기린초	0
<i>Sedum middendorffianum</i> Maximowz	애기기린초	0
<i>Sedum sarmentosum</i> Bunge	돌나물	0
<i>Sedum oryzifolium</i> Makino	땅채송화	0
<i>Sedum polystichoides</i> Hemsl.	바위채송화	0
Saxifragaceae 범의귀과		
<i>Astilbe chinensis</i> var. <i>davidii</i> Fr.	노루오줌	0
<i>Chrysosplenium grayanum</i> Maximowz	쟁이눈	0
<i>Deutzia parviflora</i> Bunge	말발도리	0
<i>Deutzia glabrata</i> Kom.	물참대	0
<i>Deutzia coreana</i> Lévl.	매화말발도리	0
<i>Philadelphus schrenckii</i> Rupr.	고광나무	0
<i>Philadelphus schrenckii</i> Rupr. var. <i>jackii</i> Koehne	털고광나무	0
<i>Hydrangea serrata</i> for. <i>acuminata</i> (S. et Z.) Wils.	산수국	0
Rosaceae 장미과		
<i>Spiraea prunifolia</i> for. <i>simpliciflora</i> Nakai	조팝나무	0
<i>Spiraea fritschiana</i> Schneid	참조팝나무	0
<i>Physocarpus amurensis</i> (Maximowz) Maximowz	산국수나무	0
<i>Stephanandra incisa</i> Zabel	국수나무	0
<i>Kerria japonica</i> (Linne) DC.	황매화	0
<i>Duchesnea chrysantha</i> (Zoll. et Morr.) Miq.	뱀딸기	0
<i>Potentilla dickinsii</i> Fr. et Sav.	돌양지꽃	0
<i>Potentilla fragarioides</i> var. <i>major</i> Maximowz	양지꽃	0
<i>Potentilla freyniana</i> Bornm.	세잎양지꽃	0
<i>Potentilla chinensis</i> Ser.	딱지꽃	0
<i>Potentilla paradoxa</i> Nutt.	개소리랑개비	0
<i>Geum japonicum</i> Thunberg	뱀무	0
<i>Rubus crataegifolius</i> Bunge	산딸기	0
<i>Rubus parvifolius</i> Linne	명석딸기	0
<i>Rubus idaeus</i> var. <i>microphyllus</i> Turcz.	명덕딸기	0
<i>Rubus coreanus</i> Miq.	복분자딸기	0
<i>Rubus oldhamii</i> Miq.	줄딸기	0
<i>Filipendula glaberrima</i> Nakai	터리풀	0
<i>Sanguisorba officinalis</i> Linne	오이풀	0
<i>Sanguisorba hakusanensis</i> Makino	산오이풀	0
<i>Agrimonia pilosa</i> Ledeb.	짚신나물	0
<i>Rosa multiflora</i> Thunberg	철레꽃	0
<i>Rosa maximowicziana</i> Regel	용가시나무	0
<i>Prunus persica</i> (Linne) Batsch	복사나무	0
<i>Prunus yedoensis</i> Matsumura	왕벚나무	0
<i>Prunus serrulata</i> var. <i>spontanea</i> (Maximowz) Wils.	벚나무	0
<i>Prunus sargentii</i> Rehder	산벚나무	0
<i>Pyrus ussuriensis</i> Maximowz	산돌배	0
<i>Pyrus pyrifolia</i> (Burm.) Nakai	돌배나무	0
<i>Pourthiaea villosa</i> Decne.	윤노리나무	0
Leguminosae 콩과		
<i>Albizia julibrissin</i> Durazz.	자귀나무	0
<i>Cercis chinensis</i> Bunge	박태기나무	0
<i>Cassia mimosoides</i> var. <i>nomame</i> Makino	차풀	0
<i>Sophora flavescens</i> Ait.	고삼	0
<i>Sophora japonica</i> Linne	회화나무	0
<i>Maackia amurensis</i> Rupr. et Maximowz var. <i>buergeri</i> C. K. Schneid.	개물푸레나무	0
<i>Lespedeza thunbergii</i> var. <i>intermedia</i> (Nakai) T. Lee	풀싸리	0
<i>Lespedeza maximowiczii</i> Schneid.	조록싸리	0

Table 2. Continued

Scientific name & Korean name	I	II
<i>Lespedeza bicolor</i> Turcz.	싸리	o
<i>Lespedeza cuneata</i> G. Don	비수리	o
<i>Lespedeza cyrtobotrya</i> Miq.	참싸리	\$
<i>Lespedeza juncea</i> var. <i>inschanica</i> Maximowz	땅비수리	\$
<i>Lespedeza</i> × <i>maritima</i> Nakai	해변싸리	\$
<i>Lespedeza pilosa</i> (Thunberg) S. et Z.	괭이싸리	\$
<i>Kummerowia striata</i> (Thunberg) Schindl.	매듭풀	o
<i>Desmodium oxyphyllum</i> DC.	도둑놈의갈고리	o
<i>Desmodium fallax</i> Schindl.	애기도둑놈의갈고리 o	
<i>Vicia sepium</i> Linne	구주갈퀴덩굴	o
<i>Vicia amoena</i> Fisch.	갈퀴나물	o
<i>Vicia unijuga</i> A. Br.	나비나물	o
<i>Vicia hirticalycina</i> Nakai	나래완두	o
<i>Lathyrus davidii</i> Hance	활랑나물	o
<i>Rhynchosia volubilis</i> Lour.	여우콩	o
<i>Vigna vexillata</i> var. <i>tsusimensis</i> Matsumura	돌동부	o
<i>Pueraria thunbergiana</i> Benth.	췌	o
<i>Glycine soja</i> S. et Z.	돌콩	o
<i>Amphicarpaea edgeworthii</i> var. <i>trisperma</i> Ohwi	새콩	\$
<i>Indigofera kirilowii</i> Maximowz	땅비싸리	o
<i>Wistaria floribunda</i> A. P. DC.	등	o
<i>Robinia pseudo-acacia</i> Japonic	아까시 나무	o
<i>Lotus corniculatus</i> var. <i>japonicus</i> Regel	별노랑이	o
<i>Amorpha fruticosa</i> Linne	죽제비싸리	o
<i>Trifolium pratense</i> Linne	붉은토끼풀	o
<i>Trifolium repens</i> Linne	토끼풀	o
<i>Crotalaria sessiliflora</i> Linne	활나물	o
Geraniales 쥐손이풀목		
Geraniaceae 쥐손이풀목		
<i>Geranium eriostemon</i> var. <i>glabrescens</i> Nakai	부전쥐손이	o
<i>Geranium sibiricum</i> Linne	쥐손이풀	o
<i>Geranium nepalense</i> subsp. <i>thunbergii</i> (S. et Z.) Hara	이질풀	o
<i>Geranium wilfordii</i> Maximowz	세잎쥐손이	o
Oxalidaceae 괭이밥목		
<i>Oxalis obtriangulata</i> Maximowz	큰괭이밥	o
<i>Oxalis corniculata</i> Linne	괭이밥	o
Rutaceae 운향목		
<i>Zanthoxylum piperitum</i> A.P. DC.	초피나무	o
<i>Zanthoxylum schinifolium</i> S. et Z.	산초나무	o
<i>Zanthoxylum schinifolium</i> S. et Z. var. <i>inermis</i> T. Lee	민산초	o
<i>Poncirus trifoliata</i> Rafin.	탱자나무	o
<i>Dictamnus dasycarpus</i> Turcz.	백선	o
<i>Dictamnus dasycarpus</i> Turcz. var. <i>velutinus</i> Nakai	털백선	o
Simaroubaceae 소태나무목		
<i>Picrasma quassioides</i> (D. Don) Benn.	소태나무	o
<i>Ailanthus altissima</i> Swingle	가죽나무	o
Euphorbiaceae 대극목		
<i>Securinega suffruticosa</i> Rehder	괭대싸리	o
<i>Sapium japonicum</i> Pax & Hoffm.	사람주나무	\$
<i>Phyllanthus ussuriensis</i> Rupr. et Maximowz	여우주머니	o
<i>Euphorbia humifusa</i> Willd.	땅빈대	o
Sapinales 무환자나무목		
Buxaceae 회양목		

Table 2. Continued

Scientific name & Korean name	I	II
<i>Buxus microphylla</i> var. <i>koreana</i> Nakai	회양목	o
Anacardiaceae 옷나무과		
<i>Rhus chinensis</i> Mill.	붉나무	o
<i>Rhus trichocarpa</i> Miq.	개옷나무	o
<i>Rhus verniciflua</i> Stokes	옷나무	o
<i>Rhus sylvestris</i> Siebold & Zucc.	산검양옷나무	\$
Aquifoliaceae 감탕나무과		
<i>Ilex macropoda</i> Miq.	대팻집나무	\$
Celastraceae 노박덩굴과		
<i>Euonymus japonica</i> Thunberg	사철나무	o
<i>Euonymus alatus</i> (Thunberg) Sieb.	화살나무	o
<i>Euonymus alatus</i> for. <i>ciliato-dentatus</i> Hiyama	회잎나무	\$
<i>Euonymus sachalinensis</i> (Fr. Schm.) Maximowz	회나무	o
<i>Euonymus macroptera</i> Rupr.	나래회나무	o
<i>Celastrus flagellaris</i> Rupr.	푼지나무	o
<i>Celastrus orbiculatus</i> Thunberg	노박덩굴	o
<i>Tripterygium regelii</i> Sprague et Takeda	미역줄나무	o
Staphyleaceae 고추나무과		
<i>Staphylea bumalda</i> DC.	고추나무	o
Aceraceae 단풍나무과		
<i>Acer ginnala</i> Maximowz	신나무	o
<i>Acer mono</i> Maximowz	고로쇠나무	o
<i>Acer palmatum</i> Thunberg	단풍나무	o
<i>Acer pseudo-sieboldianum</i> (Pax.) Kom.	당단풍	o
Sabiaceae 나도밤나무과		
<i>Meliosma myriantha</i> S. et Z.	나도밤나무	o
Balsaminaceae 봉선화과		
<i>Impatiens noli-tangere</i> Linne	노랑물봉선화	o
<i>Impatiens textori</i> for. <i>pallenscens</i> Hara	흰물봉선	o
<i>Impatiens textori</i> Miq.	물봉선	o
Rhamnales 갈매나무목		
Rhamnaceae 갈매나무과		
<i>Zizyphus jujuba</i> var. <i>inermis</i> Rehder	대추	o
Vitaceae 포도나무과		
<i>Vitis amurensis</i> Rupr.	왕머루	o
<i>Vitis coignetiae</i> Pulliat	머루	o
<i>Vitis thunbergii</i> var. <i>sinuata</i> (Regel) Rehder	까마귀머루	o
<i>Ampelopsis brevipedunculata</i> for. <i>citrullodes</i> Rehder	가새잎개머루	o
<i>Ampelopsis brevipedunculata</i> var. <i>heterophylla</i> (Thunberg) Hara	개머루	o
<i>Parthenocissus tricuspidata</i> (S. et Z.) Planch.	담쟁이덩굴	o
Malvales 아욱목		
Tiliaceae 피나무과		
<i>Tilia amurensis</i> Rupr.	피나무	o
<i>Tilia taquetii</i> Schneid.	뽕잎피나무	o
Sterculiaceae 벽오동나무과		
<i>Corchoropsis tomentosa</i> (Thunberg) Makino	수까치깨	o
Parietales 측막태좌목		
Actinidiaceae 다래나무과		

## J. KOREAN NATURE

Table 2. Continued

Scientific name & Korean name	I	II
<i>Actinidia polygama</i> (S. et Z.) Maximowz	o	
<i>Actinidia arguta</i> Planchon	o	
Theaceae 차나무과		
<i>Stewartia koreana</i> Nakai	o	
<i>Camellia japonica</i> Linne	o	
Hypericaceae 물레나물과		
<i>Hypericum ascyron</i> Linne	o	
<i>Hypericum erectum</i> Thunb.		\$
<i>Hypericum laxum</i> (Blume) Koidz.		\$
Violaceae 제비꽃과		
<i>Viola dissecta</i>		
var. <i>chaerophylloides</i> (Regel) Makino	o	
<i>Viola albida</i> Palibin	o	
<i>Viola mandshurica</i> W. Becker	o	
<i>Viola diamantica</i> Nakai	o	
<i>Viola acuminata</i> Ledeb.	o	
<i>Viola orientalis</i> W.Becker	o	
<i>Viola scabrida</i> Nakai		\$
<i>Viola japonica</i> Langsd.		\$
<i>Viola patrinii</i> DC.		\$
<i>Viola verecunda</i> A.Gray		\$
Myrtales 도금양목		
Elaeagnaceae 보리수나무과		
<i>Elaeagnus umbellata</i> Thunberg	o	
Alangiaceae 박쥐나무과		
<i>Alangium platanifolium</i> (S. et Z.) Harms	o	
<i>Alangium platanifolium</i> var. <i>macrophyllum</i> (S. et Z.) Wanger.	o	
Hydrocaryaceae 마름과		
<i>Trapa japonica</i> Flerov.	o	
Onagraceae 바늘꽃과		
<i>Epilobium pyrricholophum</i> Fr. et Sav.	o	
<i>Ludwigia prostrata</i> Roxb.		\$
<i>Oenothera odorata</i> Jacq.	o	
<i>Oenothera lamarckiana</i> Ser.	o	
Halorrhagaceae 개미땀과		
<i>Halorrhagis micrantha</i> R. Br.	o	
Umbellales 산형화목		
Araliaceae 두릅나무과		
<i>Aralia elata</i> Seem.	o	
Umbelliferae 산형과		
<i>Bupleurum falcatum</i> Linne	o	
<i>Sanicula chinensis</i> Bunge	o	
<i>Torilis japonica</i> (Houtt.) DC.	o	
<i>Oenanthe javanica</i> (Bl.) DC.	o	
<i>Sium suave</i> Walter	o	
<i>Angelica decursiva</i> (Miq.) Fr. et Sav.	o	
<i>Angelica japonica</i> A. Gray.	o	
<i>Ostericum koreanum</i> (Maximowz) Kitagawa	o	

Table 2. Continued

Scientific name & Korean name		I	II
Cornaceae 층층나무과			
<i>Cornus kousa</i> Buerg.	산딸나무	o	
<i>Cornus controversa</i> Hemsl.	층층나무	o	
<i>Cornus walteri</i> Wanger.	말채나무	o	
Metachlamydeae 함판화 群			
Ericales 잔달래목			
Pyrolaceae 노루발과			
<i>Pyrola japonica</i> Klenze	노루발	o	
Ericaceae 진달래과			
<i>Rhododendron mucronulatum</i> Turcz.	진달래	o	
<i>Rhododendron mucronulatum</i> var. <i>ciliatum</i> Nakai	털진달래	o	
<i>Rhododendron mucronulatum</i> for. <i>albiflorum</i> T.Lee	흰진달래	o	
<i>Rhododendron yedoense</i> var. <i>poukhanense</i> (Lév.) Nakai	산철쭉	o	
<i>Rhododendron schlippenbachii</i> Maximowz	철쭉꽃	o	
Promulales 앵초목			
Primulaceae 앵초과			
<i>Lysimachia coreana</i> Nakai	참좁쌀풀	o	
<i>Lysimachia clethroides</i> Duby	큰까치수영	o	
<i>Androsace umbellata</i> (Lour.) Merr.	봄맞이	o	
Ebenales 감나무목			
Ebenaceae 감나무과			
<i>Diospyros lotus</i> Linne	고욤나무	o	
<i>Diospyros kaki</i> Thunberg	감나무	o	
Symlocaceae 노린재나무과			
<i>Symplocos chinensis</i> for. <i>pilosa</i> (Nakai) Ohwi	노린재나무	o	
Styracaceae 매죽나무과			
<i>Styrax obassia</i> S. et Z.	쪽동백나무	o	
<i>Styrax japonica</i> S. et Z.	매죽나무	o	
Gentianales 용담목			
Oleaceae 물푸레나무과			
<i>Fraxinus rhynchophylla</i> Hance	물푸레나무	o	
<i>Fraxinus sieboldiana</i> Bl.	쇠물푸레	o	
<i>Fraxinus sieboldiana</i> var. <i>serrata</i> Nakai	쇠물푸레	o	
<i>Ligustrum japonicum</i> Thunberg	광나무		\$
<i>Ligustrum obtusifolium</i> S. et Z.	취뽕나무	o	
<i>Forsythia koreana</i> Nakai	개나리	o	
Gentianaceae 용담과			
<i>Swertia pseudo-chinensis</i> (Bunge) Hara	자주쓴풀	o	
<i>Swertia japonica</i> (Schult.) Makino	쓴풀		\$
<i>Gentiana scabra</i> var. <i>buergeri</i> (Miq.) Maximowz	용담	o	
Asclepiadaceae 박주가리과			
<i>Metaplexis japonica</i> (Thunberg) Makino	박주가리	o	
<i>Cynanchum paniculatum</i> Kitagawa	산해박	o	
Tubiflorales 통화식물목			
Convolvulaceae 메꽃과			
<i>Calystegia japonica</i> (Thunberg) Chois.	메꽃	o	
<i>Cuscuta australis</i> R. Br.	실새삼	o	

Table 2. Continued

Scientific name & Korean name	I	II
Borraginaceae 지치과		
<i>Bothriospermum secundum</i> Maximowz	참꽃바지	o
<i>Bothriospermum tenellum</i> Fisch. et Meyer	꽃바지	o
<i>Trigonotis icumae</i> (Maximowz) Makino	덩굴꽃마리	o
<i>Trigonotis peduncularis</i> Benth.	꽃마리	o
Verbenaceae 마편초과		
<i>Callicarpa dichotoma</i> Raeusch.	좀작살나무	o
<i>Callicarpa japonica</i> Thunberg	작살나무	o
<i>Clerodendron trichotomum</i> Thunberg	누리장나무	o
<i>Vitex rotundifolia</i> Linne fil.	순비기나무	o
<i>Caryopteris divaricata</i> (S. et Z.) Maximowz	누린내풀	o
Labiatae 꿀풀과		
<i>Scutellaria indica</i> Linne	골무꽃	o
<i>Agastache rugosa</i> (Fisch. et Meyer) O. Kuntze	배초향	o
<i>Meehania urticifolia</i> (Miq.) Makino	별깨덩굴	o
<i>Nepeta cataria</i> Linne	개박하	o
<i>Dracocephalum argunense</i> Fisch.	용머리	o
<i>Prunella vulgaris</i> var. <i>lilacina</i> Nakai	꿀풀	o
<i>Leonurus sibiricus</i> Linne	익모초	o
<i>Stachys riederi</i> var. <i>japonica</i> Miq.	석잠풀	o
<i>Lamium amplexicaule</i> Linne	광대나물	o
<i>Lamium album</i> var. <i>barbatum</i> (S. et Z.) Fr. et Sav.	광대수염	o
<i>Clinopodium gracile</i> var. <i>multicaule</i> (Maximowz) Ohwi	답꽃	o
<i>Elsholtzia ciliata</i> (Thunberg) Hylander	향유	o
<i>Elsholtzia splendens</i> Nakai	꽃향유	\$
<i>Isodon inflexus</i> (Thunberg) Kudo	산박하	o
<i>Mosla dianthera</i> Maxim.	취깨풀	\$
<i>Mosla punctulata</i> (Gmel.) Nakai	들깨풀	\$
Solanaceae 가지과		
<i>Lycium chinense</i> Mill.	구기자나무	o
<i>Physalisstrum japonicum</i> Honda	가시파리	o
<i>Solanum lyratum</i> Thunberg	배풍등	o
<i>Solanum nigrum</i> Linne	까마중	o
<i>Datura stramonium</i> Linne	독말풀	o
Scrophulariaceae 현삼과		
<i>Paulownia coreana</i> Uyeki	오동	o
<i>Mazus japonicus</i> (Thunberg) Kuntze	주름잎	o
<i>Lindernia procumbens</i> Borb.	밭뚝외풀	\$
<i>Lindernia micrantha</i> D. Don.	논뚝외풀	o
<i>Veronica linariaefolia</i> Pall.	꼬리풀	o
<i>Veronica didyma</i> var. <i>lilacina</i> (Hara) Yamazaki	개불알풀	o
<i>Veronica persica</i> Poir.	큰개불알풀	\$
<i>Melampyrum roseum</i> Maximowz	꽃머느리밥풀	o
<i>Pedicularis resupinata</i> Linne	송이풀	o
Acanthaceae 쥐꼬리망초과		
<i>Justicia procumbens</i> Linne	쥐꼬리망초	o
Phrymaceae 파리풀과		
<i>Phryma leptostachya</i> var. <i>asiatica</i> Hara	파리풀	o
Plantaginales 질경이목		
Plantaginaceae 질경이과		
<i>Plantago asiatica</i> Linne	질경이	o

Table 2. Continued

Scientific name & Korean name	I	II
Rubiales 꼭두서니목		
Rubiaceae 꼭두서니과		
<i>Paederia scandens</i> (Lour.) Merr.	계요등	0
<i>Rubia akane</i> Nakai	꼭두서니	0
<i>Galium verum</i> var. <i>asiaticum</i> Nakai	솔나물	0
<i>Galium trachyspermum</i> A. Gray	네잎갈퀴	0
Caprifoliaceae 인동과		
<i>Sambucus williamsii</i> var. <i>coreana</i> Nakai	딱총나무	0
<i>Viburnum carlesii</i> Hemsl.	분꽃나무	0
<i>Viburnum furcatum</i> Bl.	분단나무	0
<i>Viburnum erosum</i> Thunberg	털꿩나무	0
<i>Viburnum sargentii</i> Koehne	백당나무	0
<i>Weigela subsessilis</i> L. H. Bailey	병꽃나무	0
<i>Lonicera japonica</i> Thunberg	인동	0
<i>Lonicera maackii</i> Maximowz	괴불나무	0
Valerianaceae 마타리과		
<i>Patrinia scabiosaeifolia</i> Fisch.	마타리	0
<i>Patrinia villosa</i> (Thunberg) Juss.	뚝갈	0
<i>Valeriana fauriei</i> Briq.	취오줌풀	0
Cucurbitales 박목		
Cucurbitaceae 박과		
<i>Trichosanthes kirilowii</i> Maximowz	하늘타리	0
<i>Gynostemma pentaphyllum</i> (Thunberg) Makino	돌외	0
Campanulales 초롱꽃목		
Campanulaceae 초롱꽃과		
<i>Adenophora grandiflora</i> Nakai	도라지모시대	0
<i>Adenophora triphylla</i> var. <i>japonica</i> Hara	잔대	0
<i>Adenophora triphylla</i> var. <i>hirsuta</i> Nakai	털잔대	0
<i>Adenophora remotiflora</i> (S. et Z.) Miq.	모시대	0
<i>Campanula punctata</i> Lam.	초롱꽃	0
<i>Codonopsis lanceolata</i> (S. et Z.) Trautv.	더덕	0
<i>Platycodon grandiflorum</i> (Jacq.) A. DC.	도라지	0
Lobeliaceae 슷잔대과		
<i>Lobelia chinensis</i> Lour.	수염가래꽃	0
Compositae 국화과		
<i>Gnaphalium japonicum</i> Thunberg	풀썸나물	0
<i>Galinsoga ciliata</i> (Raf.) S.F.Blake	털별꽃아재비	\$
<i>Carpesium abrotanoides</i> Linne	담배풀	0
<i>Ainsliaea acerifolia</i> Sch.-Bip.	단풍취	0
<i>Ambrosia artemisiifolia</i> var. <i>elatio</i> Descourtils	돼지풀	0
<i>Eupatorium chinense</i> var. <i>simplicifolium</i> Kitamura	등골나물	0
<i>Eupatorium fortunei</i> Turcz.	별등골나물	0
<i>Solidago virga-aurea</i> var. <i>asiatica</i> Nakai	미역취	0
<i>Aster koraiensis</i> Nakai	별개미취	0
<i>Aster yomena</i> Makino	쑥부쟁이	0
<i>Aster pilosus</i> Willd.	미국쑥부쟁이	\$
<i>Aster scaber</i> Thunberg	참취	0
<i>Aster spathulifolius</i> Maximowz	해국	0
<i>Conyza sumatrensis</i> E. Walker	큰망초	\$
<i>Erigeron annuus</i> (Linne) Pers.	개망초	0
<i>Erigeron canadensis</i> Linne	망초	0
<i>Petasites japonicus</i> (S. et Z.) Maximowz	머위	0
<i>Emilia flammea</i> Cass.	불꽃썸바귀	0

## J. KOREAN NATURE



Table 2. Continued

Scientific name & Korean name	I	II
<i>Senecio vulgaris</i> Linne	개쑥갓	o
<i>Cacalia auriculata</i> var. <i>matsumurana</i> Nakai	박취나물	o
<i>Syneilesis palmata</i> (Thunberg) Maximowz	우산나물	o
<i>Achillea sibirica</i> Ledeb.	톱풀	o
<i>Chrysanthemum zawadskii</i> var. <i>latilobum</i> Kitamura	구절초	o
<i>Chrysanthemum boreale</i> Makino	산국	o
<i>Artemisia scoparia</i> Waldst. et Kitamura	비쑥	o
<i>Artemisia keiskeana</i> Miq.	맑은대쑥	o
<i>Artemisia montana</i> Pampan.	산쑥	o
<i>Artemisia princeps</i> var. <i>orientalis</i> (Pampan.) Hara	쑥	o
<i>Artemisia capillaris</i> Thunb.	사철쑥	\$
<i>Siegesbeckia glabrescens</i> Makino	진득찰	o
<i>Eclipta prostrata</i> Linne	한련초	o
<i>Bidens tripartita</i> Linne	가막사리	o
<i>Bidens bipinnata</i> Linne	도깨비바늘	o
<i>Bidens biternata</i> (Lour.) Merr. & Sherff ex Sherff	털도깨비바늘	\$
<i>Bidens pilosa</i> L.	울산도깨비바늘	\$
<i>Atractylodes japonica</i> Koidz.	삼주	o
<i>Carduus crispus</i> Linne	지느러미영경귀	o
<i>Cirsium japonicum</i> var. <i>ussuriense</i> Kitamura	영경귀	o
<i>Crassocephalum crepidioides</i> (Benth.) S.Moore	주홍서나물	\$
<i>Saussurea pulchella</i> Fisch.	각시취	o
<i>Saussurea gracilis</i> Maximowz	은분취	o
<i>Saussurea conandriifolia</i> Nakai	담배취	o
<i>Serratula coronata</i> var. <i>insularis</i> Kitamura	산비장이	o
<i>Rhapontica uniflora</i> DC.	빼꼭채	o
<i>Cephalonoplos segetum</i> (Bunge) Kitamura	조뱅이	o
<i>Cosmos bipinnatus</i> Cav.	코스모스	o
<i>Crepidiastrum denticulatum</i> (Houtt.) J.H.Pak & Kawano	이고들빼기	\$
<i>Taraxacum platycarpum</i> H. Dahlst.	민들레	o
<i>Taraxacum officinale</i> Weber	서양민들레	o
<i>Lactuca indica</i> var. <i>lacinata</i> (O. Kuntze) Hara	왕고들빼기	o
<i>Youngia japonica</i> (Linne) DC.	뽕리뱅이	o
<i>Youngia sonchifolia</i> Maximowz	고들빼기	o

## Vegetation

The vegetation of the Gyeongju National Park seemed good in Tohamsan and Danseoksan areas while the vegetation was very simple in other areas. Lee (1997) reported Pte-Q, which is a barometer of damage to the forest vegetation, was 0.62, however, this research found Pte-Q was 1.35, which meant that the forest succession has progressed better than 10 years. It turned out higher than those of Mt. Gayasan (1.27), Mt. Juwangsang (0.95), and Mt. Chiaksan (0.89).

In the Tohamsan area, *Nymphaea tetragona* var. *angusta*, *Iris pseudoacorus*, *Spirodela polyrhiza*, *Trapa japonica*, *Potamogeton crispus* inhabited ponds in the front yard of Bulguksa Temple. The southern slope of Mt. Tohamsan seemed to heavily be inhabited, but the dominant species was *Pinus densiflora*. *P. koraiensis* grew in some areas. *Quercus mongolica* was dominant in the area from the Iljumun Gate of Seokguram to the mountain top and *Styrax japonica*, *Abies holophylla*, *Corylus heterophylla* var.

*thunbergii*, *Rhododendron mucronulatum* var. *ciliatum*, *Prunus sargentii*, *Fraxinus rhynchophylla*, *Castanea creanta*, and *Tilia taquetii* grew as well. *Pinus koraiensis* in stock on the southwestern slope while *Q. variabilis* and *Q. mongolica* lived in stock 300 to 600 m on the western, northern, and eastern slopes. *Q. mongolica* lived in stock near the Manhobong and *Q. mongolica*, *Pinus densiflora*, and *Larix kaempferi* lived in stock on the northwestern slope of Manhobong. *Q. variabilis* and *Q. acutissima* lived in stock in Sibugeo-ri on the northern slope of Mt. Tohamsan. *Carpinus laxiflora* lived in stock in the valley. *Q. variabilis* lived in stock on the Upoongi slope, Beomgok-ri and near Mt. Baikdosan, Janghang-ri, Yangbuk-myeon. *Q. variabilis* and *Q. serrata* lived in stock in the Hwangyongsaji valley, Hwangryong-dong. *Q. variabilis* and *Q. acutissima* lived in stock on the southern slope of Hantibeodeul. Some areas of the northern slope of Hwangryongsaji and Chamnamujeon were oxidation ponds, where *Quercus* species formed coppice forest. On the verge between Deok-

dong and Eumgok-dong slopes grew *Pinus densiflora*. About 20 to 30 cm *Platycarya strobilacea* DBH grew in stock 300 meters high from Deok-dong to Mt. Cheongsan while acacia lived in stock around Deokdongho Lake. *Q. variabilis* and *Q. mongolica* lived in stock under 400 meters high. *Q. serrata*, *Q. alinena*, *Zanthoxylum schinifolium*, *Prunus sargentii*, *Fagaria mantschurica* var. *inermis*, *Pinus densiflora*, *Picrasma quassioides*, *Platycarya strobilacea*, *Styrax japonica*, *Cornus controversa*, *Alangium platanifolium* var. *macrophyllum*, *Zelkova serrata*, *Alangium platarfolim*, and *Morus bombycis* grew under 400 m high.

*Q. mongolica* lived in stock 400 m or higher and there were colonies of *Q. variabilis* and *Q. alinena* on the slope toward the look-out shed (Gyeongju Ranch). There were a colony of *Q. variabilis* and a colony of *Q. mongolica* and *Q. serrata* on the northern slope of Orion Ranch. There were relicts of *Pinus densiflora*, *Carpinus laxiflora*, and *Zelkova serrata* in the vicinity of the Girimsa Temple.

Forests in the Daebon area, called Gampo area, were composed of colonies of *Pinus thunbergii*. There were a colony of *Q. variabilis* in the valleys, a colony of *Phyllostachys nigra* var. *henonis* near residential areas, and a colony of *Robinia pseudo-acacia* near cultivated land. *Zostera marina* prevailed on the beds of the sea and *Phyllospadix iwatensis* lived on subtidal rocky shore. *Aster spathulifolium*, *Orostachys malacophyllus*, *Vitex rotundifolia*, *Sedum oryzifolium*, and *Youngia denticulata* prevailed on the coastal cliffs. *P. koraiensis* was planted on some of the northwestern slope.

In the Seoak area, a colony of *P. densiflora* prevailed and with human intervention, a colony of acacia were planted on the edge of the pine tree colony.

*Robinia pseudo-acacia* was planted on the verge of eastern slope and northwestern slope of the Hwarang area. Colonies of *P. densiflora* were found on the northern slope. The southern slope was an oxidated land and showed the first stage succession where a sprout forest of oaks were developed.

A colony of *P. densiflora* was dominant in the whole Sogeumgang area and a colony of *P. thunbergii* was formed in a shape of band on its verge, which was presumably planted. A colony of *Q. acutissima* was formed on some of the western slope of Yonggang-dong. There was a military base in the Dongcheon-dong valley, which may give damage to surrounding forests.

*Larix kaempferi* was planted on the verge of the northwestern slope and a colony of *P. densiflora* grew on the verge of western slope and around 600 m high on the northwestern slope of Danseoksan area. *Q. variabilis* grew in stock on the southern slope, *Q. serrata* and *Q. alinena* prevailed in stock on the edge of northern slope, of the

Sinseonsa Temple. *Q. acutissima* grew in stock around 600 m high south of the mountain top, and *Q. mongolica* lived in stock around the top. In addition, colonies of *Q. serrata* were formed mostly in mid-slopes.

Colonies of *P. densiflora* prevailed mostly in the Gumisan area and *P. thunbergii* was dominant on the edge of Haguri. Colonies of *Q. variabilis* prevailed on the northeastern and northwestern slopes of Sanamsa-ri. *Larix kaempferi* was planted on some of the eastern slope of Mt. Gumisan and some of the back slope of Gajeong-ri.

Colonies of *P. thunbergii* were formed in a shape of band on the western, northern and eastern slopes of the Namsan area. Except the colonies of *Phyllostachys nigra* var. *henonis* on some verge area near Hwarang Training Center, colonies of *P. densiflora* prevailed on most of the area. The whole Namsan area was covered with colonies of *P. densiflora*. On the other hand, aquatic plants such as lotus, *Trapa japonica*, *Ceratophyllum demersum*, *Spirodela polyrrhiza*, *Lemna perpusilla*, *Hydrilla verticillata*, and *Typha angustata* lived in the pond beside Dongiljeon in Namsan-dong.

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